

Amendment
Serial No. 10/781,006

Docket 5000-1-506

REMARKS

Entry of this amendment, reconsideration of all grounds of rejection in the Office Action, and allowance of all of the pending claims are respectfully requested in light of the above amendments and the following remarks. Claims 1-18 remain pending herein. Claim 4 has been cancelled.

Claim 1 has been amended to clarify that the reflectors reflect demultiplexed signals back to the multiplexing/demultiplexing unit; support is found in the specification at least at page 8, lines 15-17. Claim 2 was amended to improve form, and claims 14-16 were amended in accordance with the Examiner's suggestions in the Final Office Action.

Applicant respectfully notes with appreciation that the previous grounds of objection, as well as rejection under 35 U.S.C. § 112 were withdrawn.

Applicant respectfully submits that the amendments to claims 14-16, which were made in accordance with the Examiner's suggestions, now overcomes all new grounds of rejection under 35 U.S.C. § 112, first paragraph, in the current Office Action. Moreover, as there were no art-based rejections of claims 14-17, Applicant respectfully submits these claims are in condition for allowance.

Claims 1, 4, 9-13 and 18 stand rejected under 35 USC § 103(a) as being unpatentable over Yamamoto et al. (US 5,930,015) in view of Lee et al. (U.S. Patent Publication 2001/0004290 A1, hereinafter "Lee"). Applicant respectfully submits that all grounds of rejection are now overcome.

In the Final Action, claim 1 was rejected in view of the combination of Yamamoto and Lee. It was admitted in the Office Action that Yamamoto does not

Amendment
Serial No. 10/781,006

Docket 5000-1-506

disclose a central office in which a multi-wavelength lasing source is located, said multi-wavelength lasing source having a multiplexing/demultiplexing unit and a plurality of reflectors coupled to the multiplexing/demultiplexing unit. However, Lee was cited (Fig. 3 in particular) to show in combination with Yamamoto, a multi-channel WDM light source with reflectors, wherein it is stated in the Office Action "notice the (D)MUX and FP-LDs, FP-LDs comprise reflectors."

However, Applicant respectfully disagrees that a series of Fabry-Perot Laser Diodes that receive an individual demultiplexed output are "a plurality of reflectors comprised of mirrors" as recited in claim 1.

First of all, while a Fabry-Perot Laser Diode has two reflecting surfaces inside a cavity, the reflecting surfaces face each other so as to reflect light back and forth, and one or both transmit a fraction of the resonant frequency. The resonance is created by making the distance of one round trip between reflective surfaces equal to an integral number of wavelengths of the cavity material. The reflection back and forth creates constructive interference if the reflections are in phase, or destructive interference occurs if the reflections are not in phase. In any event, the FPLD shown in Lee does not reflect the light back to the demultiplexer shown in Fig. 3 of Lee, nor is the demultiplexer a multiplexing/demultiplexing unit as recited in claim 1.

In response to the above discussion, Applicants have amended claim 1 to recite that a plurality of reflectors comprised of mirror is coupled to the multiplexing/demultiplexing unit to reflect demultiplexed signals back to the multiplexing/demultiplexing unit. It is clear from a study of Fig. 3 of Lee that the output of the demultiplexer is used to inject narrow-band incoherent light into the FPLDs

Amendment
Serial No. 10/781,006

Docket 5000-1-506

to cause the output of the Fabry-Perot laser diodes to be wavelength selective, rather than multi-mode. In any event, it is clear that Lee does not disclose that the Fabry-Perot laser diodes are used for reflection of spectrum-sliced signals output from the demultiplexer back to the demultiplexer to be multiplexed, as in the present claim 1. Accordingly, the combination of Yamamoto and Lee would not have made present claim 1 obvious at the time of invention to a person of ordinary skill in the art. The combination of Yamamoto and Lee fails to teach, suggest, or motivate a person of ordinary skill in the art such that claim 1 would have been obvious to the artisan. In addition, a person of ordinary skill in the art would not have found claim 1 to have been obvious because the invention as recited in claim 1 is not within the ordinary skill in the art.

To reject a claim under section 103, the United States Court of Appeals for the Federal Circuit required a showing of an un rebutted prima facie case of obviousness (*In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998)). A rejection of a claim under section 103 as being obvious, meanwhile, requires showing that the prior art references, alone or in combination, teach all features in the claims (*In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)), including those in functional language (*In re Schreiber*, 128 F.3d at 1478).

For at least for the foregoing reasons, reconsideration and withdrawal of this ground of rejection of claim 1 is respectfully requested. In addition, claims 4, 9-13 and 18 are also patentable in view of the combination of Yamamoto and Lee, at least for their dependency from claim 1, which is believed to be patentable, and because of a separate basis for patentability. Accordingly, individual consideration of each claim on its own merits is respectfully requested.

Amendment
Serial No. 10/781,006

Docket 5000-1-506

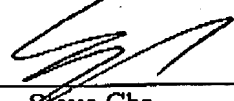
With regard to the other rejections of claims 2-3, 5-8, and 14-15 under 35 U.S.C. §103(a), Applicant respectfully submits that as claim 1 is not obvious in view of any combination of Yamamoto, Lee, Jung, Iannone, Ramaswami, all of the above claims are believed patentable at least for their dependence from claim 1, and because of a separate basis for patentability. Reconsideration and withdrawal of all grounds of rejection under 35 U.S.C. §103 (a) are respectfully requested.

For all the foregoing reasons, it is respectfully submitted that all grounds of rejection in the Office Action are overcome. A notice of Allowance is respectfully requested.

Should the Examiner deem that there are any issues, which may be best, resolved by telephone communication, please contact Applicant's undersigned Attorney at the number listed below.

Respectfully submitted,

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